

We claim:

1. A method for treating a recirculating water system which comprises introducing into said water system a multifunctional, multilayer tablet, wherein the multilayer tablet comprises a fast dissolving layer and a slow dissolving layer, wherein said fast dissolving layer releases a combination of active ingredients including a member selected from the group consisting of lithium hypochlorite, calcium hypochlorite, trichloroisocyanuric acid (TCCA), anhydrous sodium dichloroisocyanurate, sodium persulfate, potassium persulfate, potassium monopersulfate, sodium monopersulfate, and mixtures thereof, and at least one of a clarifier, chelating agent, sequesterant, algaestat, water softener, algacide, corrosion inhibitor, scale inhibitor, flocculent, disintegrant, dispersant, colorant, dissolution control agent, fragrance, or surfactant and,

wherein said slow dissolving layer includes a member selected from the group consisting of trichloroisocyanuric acid (TCCA), calcium hypochlorite, 1,3-dichloro-5,5-dimethylhydantoin (DCDMH), 1,3-dibromo-5,5-dimethylhydantoin (DBDMH), 1-bromo-3-chloro-5,5-dimethylhydantoin (BCDMH), 1,3-dichloro-5-ethyl-5-methylhydantoin (DCEMH), 1,3-dibromo-5-ethyl-5-methylhydantoin (DBEMH), 1-bromo-3-chloro-5-methyl-5-ethylhydantoin (BCEMH), and mixtures thereof, and at least one of a clarifier, chelating agent, sequesterant, algaestat, water softener, algacide, corrosion inhibitor, scale inhibitor, flocculent, disintegrant, dispersant, colorant, dissolution control agent or surfactant.

2. The method according to claim 1 wherein the fast dissolving layer is formulated to release the combination of active ingredients in less than 12 hours.

3. The method according to claim 1 wherein the slow dissolving layer is formulated to release said component in an extended period of time that is greater than 1 day.

4. The method according to claim 1 wherein the fast dissolving layer is formulated to release a combination of active ingredients in less than 6 hours upon addition to a water system.

5. The method according to claim 1 wherein the slow dissolving layer is formulated to release the combination of components in a time period from 2 to 30 days upon addition to the water system.

6. The method according to claim 1 wherein the fast dissolving layer is anhydrous sodium dichloroisocyanuric acid and the slow dissolving layer is trichloroisocyanuric acid.
7. The method according to claim 1 wherein an active halogen component is present in the slow dissolving layer at a level of from 50% to 99% by weight.
8. The method according to claim 1 wherein the fast dissolving layer has a dissolution aid selected from the group consisting of alkali metal and alkaline earth carbonate salts, sodium cyanurate, disodium cyanurate and trisodium cyanurate.
9. The method according to claim 1 wherein the fast dissolving layer further includes sodium or potassium monopersulfate or sodium or potassium persulfate
10. The method according to claim 1 wherein the tablet contains a corrosion inhibitor.
11. The method according to claim 1 wherein the tablet contains a scale inhibitor or water softener.
12. The method according to claim 1 wherein the tablet contains a water clarifier.
13. The method according to claim 1 wherein the tablet contains an oxidizer.
14. The method according to claim 1 wherein the tablet contains an algicide.
15. The method according to claim 1 wherein the tablet contains a surfactant and/or dispersant.
16. The method according to claim 1 wherein the tablet contains a binder.
17. The method according to claim 16 wherein the binder is a member selected from the group consisting of natural polymers and synthetic polymers.
18. The method according to claim 1 wherein the tablet contains a colorant.
19. The method according to claim 1 wherein the tablet contains a fragrance.
20. A multilayer tablet which comprises a fast dissolving layer and a slow dissolving layer wherein the fast dissolving layer contains a member selected from the group consisting of lithium hypochlorite, calcium hypochlorite, trichloroisocyanuric acid (TCCA), anhydrous sodium dichloroisocyanurate, sodium persulfate, potassium

persulfate, potassium monopersulfate, sodium monopersulfate, and mixtures thereof, and one or more of a clarifier, chelating agent, sequesterant, algaestat, water softener, algaecide, corrosion inhibitor, scale inhibitor, flocculent, disintegrant, dispersant, colorant, dissolution control agent, fragrance, or surfactant and,

wherein said slow dissolving layer includes a member selected from the group consisting of trichloroisocyanuric acid (TCCA), calcium hypochlorite, 1,3-dichloro-5,5-dimethylhydantoin (DCDMH), 1,3-dibromo-5,5-dimethylhydantoin (DBDMH), 1-bromo-3-chloro-5,5-dimethylhydantoin (BCDMH), 1,3-dichloro-5-ethyl-5-methylhydantoin (DCEMH), 1,3-dibromo-5-ethyl-5-methylhydantoin (DBEMH), 1-bromo-3-chloro-5-ethyl-5-methylhydantoin (BCEMH), and mixtures thereof and one or more of a clarifier, chelating agent, sequesterant, algaestat, water softener, algaecide, corrosion inhibitor, scale inhibitor, flocculent, disintegrant, dispersant, colorant, dissolution control agent, or surfactant.

21. The multilayer tablet according to claim 20 wherein the fast dissolving layer is formulated to release the combination of active ingredients in less than 12 hours.

22. The multilayer tablet according to claim 20 wherein the slow dissolving layer is formulated to release said component in an extended period of time that is greater than 1 day.

23. The multilayer tablet according to claim 20 wherein the fast dissolving layer is formulated to release a combination of active ingredients in less than 2 hours upon addition to a water system.

24. The multilayer tablet according to claim 20 wherein the slow dissolving layer is formulated to release the combination of components in a time period from 2 to 120 days upon addition to the water system.

25. The multilayer tablet according to claim 20 wherein the fast dissolving layer is anhydrous sodium dichloroisocyanuric acid and the slow dissolving layer is trichloroisocyanuric acid.

26. The multilayer tablet according to claim 20 wherein an active halogen component is present in the slow dissolving layer at a level of from 50% to 99% by weight.

27. The multilayer tablet according to claim 26 wherein the amount of active halogen component is present in the slow dissolving layer at a level of 75% to 95% by weight.

28. The multilayer tablet according to claim 20 wherein the fast dissolving layer has a dissolution aid selected from the group consisting of alkali metal and alkaline earth carbonate salts, sodium cyanurate, disodium cyanurate and trisodium cyanurate.

29. The multilayer tablet according to claim 20 wherein the fast dissolving layer includes a member selected from the group consisting of sodium or potassium monopersulfate, sodium persulfate and potassium persulfate.

30. The multilayer tablet according to claim 20 wherein the tablet contains a corrosion inhibitor.

31. The multilayer tablet according to claim 20 wherein the tablet contains a scale inhibitor or water softener.

32. The multilayer tablet according to claim 20 wherein the tablet contains a water clarifier.

33. The multilayer tablet according to claim 20 wherein the tablet contains an oxidizer.

34. The multilayer tablet according to claim 20 wherein the tablet contains an algacide.

35. The multilayer tablet according to claim 20 wherein the tablet contains a surfactant and/or dispersant.

36. The multilayer tablet according to claim 20 wherein the tablet contains a binder.

37. The multilayer tablet according to claim 36 wherein the binder is a member selected from the group consisting of natural polymers and synthetic polymers.

38. The multilayer tablet according to claim 37 wherein the tablet contains a colorant.

39. A method for treating a toilet tank which comprises introducing into said toilet tank a multifunctional, multilayer tablet, wherein the multilayer tablet consists of a fast dissolving layer and a slow dissolving layer, wherein said fast dissolving layer

releases a combination of active ingredients including a member selected from the group consisting of lithium hypochlorite, calcium hypochlorite, trichloroisocyanuric acid (TCCA), anhydrous sodium dichloroisocyanurate, sodium persulfate, potassium persulfate, potassium monopersulfate, and mixtures thereof, and at least one of a clarifier, chelating agent, sequesterant, algaestat, water softener, algaecide, corrosion inhibitor, scale inhibitor, flocculent, disintegrant, dispersant, colorant, dissolution control agent, fragrance, or surfactant and,

wherein said slow dissolving layer includes a member selected from the group consisting of trichloroisocyanuric acid (TCCA), calcium hypochlorite, 1,3-dichloro-5,5-dimethylhydantoin (DCDMH), 1,3-dibromo-5,5-dimethylhydantoin (DBDMH), 1-bromo-3-chloro-5,5-dimethylhydantoin (BCDMH), 1,3-dichloro-5-ethyl-5-methylhydantoin (DCEMH), 1,3-dibromo-5-ethyl-5-methylhydantoin (DBEMH), 1-bromo-3-chloro-5-ethyl-5-methylhydantoin (BCEMH), and mixtures thereof, and at least one of a clarifier, chelating agent, sequesterant, algaestat, water softener, algaecide, corrosion inhibitor, scale inhibitor, flocculent, disintegrant, dispersant, colorant, dissolution control agent or surfactant.

40. The method according to claim 1 wherein the slow dissolving layer is formulated to release the combination of components in a time period between 2 and 150 days upon addition to the water system.